



<110> van Leengoed, Leonardus Adrianus Maria Govardus
Hoebe, Kasper Hubertus Nicolaas
Meloen, Robert Hans

<120> IL-6 and IL-6 receptor derived peptide having IL-6 antagonistic
or agonistic activity

<130> 2183-3890US

<140> US 09/202,104

<141> 1999-04-30

<150> EP 96201720.8

<151> 1996-06-20

<150> PCT/NL97/00345

<151> 1997-06-19

<160> 19

<170> PatentIn version 3.2

<210> 1

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> region in IL-6

<400> 1

Arg Tyr Ile Leu Asp Gly Ile Ser Ala Leu Arg Lys

1

5

10

<210> 2
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<212> PRT
<213> Artificial Sequence

<220>
<223> region in IL-6

<400> 2

Ser Thr Lys Val Leu Ile Gln Phe Leu Gln Lys Lys Ala Lys Asn Leu
1 5 10 15

<210> 3
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> region in IL-6

<400> 3

Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser Ser Leu Arg Ala Leu
1 5 10 15

Arg Gln Met

<210> 4
<211> 15
<212> PRT

<213> Artificial Sequence

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<223> region of receptor alpha-chain of IL-6

<400> 4

Gln Leu Ser Cys Phe Arg Lys Ser Pro Leu Ser Asn Val Val Cys
1 5 10 15

<210> 5

<211> 21

<212> PRT

<213> Artificial Sequence

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<223> region of receptor alpha-chain of IL-6

<400> 5

Pro Arg Ser Thr Pro Ser Leu Thr Thr Lys Ala Val Leu Leu Val Arg
1 5 10 15

Lys Phe Gln Asn Ser

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<210> 6

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Met Cys Val Ala Ser Ser Val Gly Ser Lys Phe Ser Lys Thr Gln Thr
1 5 10 15

Phe Gln Gly Cys
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<223> region of receptor beta-chain of IL-6

<400> 7

Pro Glu Lys Pro Lys Asn Leu Ser Cys Ile Val Asn Glu Gly Lys Lys
1 5 10 15

Met Arg Cys Glu Trp Asp Gly Gly Arg
20 25

<210> 8

<211> 25

<212> PRT

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<400> 8

Asn Phe Thr Leu Lys Ser Glu Trp Ala Thr His Lys Phe Ala Asp Cys
1 5 10 15

Lys Ala Lys Arg Asp Thr Pro Thr Ser
20 25

<210> 9
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<400> 9.

Trp Val Glu Ala Glu Asn Ala Leu Gly Lys Val Thr Ser Asp His
1 5 10 15

<210> 10
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<212> PRT
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<223> region of receptor beta-chain of IL-6

<400> 10

Pro Val Tyr Lys Val Lys Pro Asn Pro Pro His Asn Leu Ser Val Ile
1 5 10 15

Asn

<210> 11
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<220>
<223> region of receptor alpha-chain of IL-6

<400> 11

Glu Trp Gly Pro Arg Ser Thr Pro Ser Leu Thr Thr Lys Ala Val Leu
1 5 10 15

Leu Val Arg Lys Phe Gln Asn Ser Pro Ala Glu Asp
20 25

<210> 12
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<220>
<223> human IL-6 peptide

<400> 12

Ala Pro Pro Val Pro Pro Gly Glu Asp Ser Lys Asp Val Ala Ala Pro
1 5 10 15

His Arg Gln Pro Leu Thr Ser Ser Glu Arg Ile Ser Lys Gln Ile Arg

20

25

30

Tyr Ile Leu Asp Gly Ile Ser Ala Leu Arg Lys Glu Thr Cys Asn Lys
35 40 45

Ser Asn Met Cys Glu Ser Ser Lys Glu Ala Leu Ala Glu Asn Asn Leu
50 55 60

Asn Leu Pro Lys Met Ala Glu Lys Asp Gly Cys Phe Gln Ser Gly Phe
65 70 75 80

Asn Glu Glu Thr Cys Leu Val Lys Ile Ile Thr Gly Leu Leu Glu Phe
85 90 95

Glu Val Tyr Leu Glu Tyr Leu Gln Asn Arg Phe Glu Ser Ser Glu Glu
100 105 110

Gln Ala Arg Ala Val Gln Met Ser Thr Lys Val Leu Ile Gln Phe Leu
115 120 125

Gln Lys Lys Ala Lys Asn Leu Asp Ala Ile Thr Thr Pro Asp Pro Thr
130 135 140

Thr Asn Ala Ser Leu Leu Thr Lys Leu Gln Ala Gln Asn Gln Trp Leu
145 150 155 160

Gln Asp Met Thr Thr His Leu Ile Leu Ile Arg Ser Phe Lys Glu Phe
165 170 175

Leu Gln Ser Ser Leu Arg Ala Leu Arg Gln Met
180 185

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<222> (60)..(65)
<223> Xaa on pos. 60 and 65 is unknown

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<221> misc_feature
<222> (60)..(60)
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (65)..(65)
<223> Xaa can be any naturally occurring amino acid

<400> 13

Pro Pro Glu Glu Pro Gln Leu Ser Cys Phe Arg Lys Ser Pro Leu Ser
1 5 10 15

Asn Val Val Cys Glu Trp Gly Pro Arg Ser Thr Pro Ser Leu Thr Thr

20

25

30

Lys Ala Val Leu Leu Val Arg Lys Phe Gln Asn Ser Pro Ala Glu Asp
35 40 45

Phe Gln Glu Pro Cys Gln Tyr Ser Gln Glu Ser Xaa Lys Phe Ser Cys
50 55 60

Xaa Leu Ala Val Pro Glu Gly Asp Ser Ser Phe Tyr Ile Val Ser Met
65 70 75 80

Cys Val Ala Ser Ser Val Gly Ser Lys Phe Ser Lys Thr Gln Thr Phe
85 90 95

Gln Gly Cys Gly Ile Leu Gln Pro Asp Pro Pro Ala Asn Ile Thr Val
100 105 110

<210> 14

<211> 108

<212> PRT

<213> Artificial Sequence

<220>

<223> receptor beta-chain of IL-6

<400> 14

Pro Pro Glu Lys Pro Lys Asn Leu Ser Cys Ile Val Asn Glu Gly Lys
1 5 10 15

Lys Met Arg Cys Glu Trp Asp Gly Gly Arg Glu Thr His Leu Glu Thr
20 25 30

Asn Phe Thr Leu Lys Ser Glu Trp Ala Thr His Lys Phe Ala Asp Cys
35 40 45

Lys Ala Lys Arg Asp Thr Pro Thr Ser Cys Thr Val Asp Tyr Ser Thr
50 55 60

Val Tyr Phe Val Asn Ile Glu Val Trp Val Glu Ala Glu Asn Ala Leu
65 70 75 80

Gly Lys Val Thr Ser Asp His Ile Asn Phe Asp Pro Val Tyr Lys Val
85 90 95

Lys Pro Asn Pro Pro His Asn Leu Ser Val Ile Asn
100 105

<210> 15

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> region in IL-6

<400> 15

Ser Leu Thr Thr Lys Ala Val
1 5

<210> 16
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<212> PRT
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<220>
<223> region in IL-6

<400> 16

Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser Ser
1 5 10

<210> 17
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<213> Artificial Sequence

<220>
<223> region in IL-6

<400> 17

Trp Val Glu Ala Glu Asn Ala Leu Gly Lys Val Thr Ser Asp His
1 5 10 15

<210> 18
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<212> PRT
<213> Artificial Sequence

<220>
<223> region in IL-6

<400> 18

Arg Tyr Ile Leu Asp

1 5

<210> 19

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> region in IL-6

<400> 19

Lys Ala Val Leu Leu Val Arg Lys

1 5